

United States Patent [19]

Lieberman

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[54] VIGILANCE MONITOR SYSTEM

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[58] Field of Search 128/733, 774, 128/782

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[57]

ABSTRACT

This invention includes a plurality of ambient sensors at least one human subject stimulator, at least one sensor adapted to detect the human subject response to the stimuli, and a controller programmed to receive information from the environmental or ambient sensors, to control the stimulators, and to record the human subject's response to the stimuli via the human response sensors. The invention can monitor and record, over a series of consecutive time periods, the human subject's vigilance, level of physical activity, and other physiological, physical, and chemical variables pertaining to the subject and his or her ambient environment. The invention can be used to prevent impairments in mental performance occurring due to fatigue or exposure to adverse environmental conditions or human subject condition. Based on continuous evaluations of the status of the subject (and if so desired, the ambient environment) the vigilance monitor can be programmed to automatically intervene to prevent degradation in mental performance by providing a warning to the subject or to others.

40 Claims, 17 Drawing Sheets

